BUSINESS CYCLE PHASES:

The recurring, but irregular, pattern of business cycles can be divided into two basic phases--expansion and contraction. An expansion is a period of increasing economic activity and a contraction is a period of declining economic activity. These two phases are marked by two transitions. The transition from expansion to contraction is termed a peak and the transition from contraction to expansion is termed a trough. The early portion of an expansion is often referred to as a recovery.

A [business cycle](javascript:pop_dsp('pop_gls.pl?k=business%20cycle',500,400)) is comprised of distinct phases, a general period of [expansion](javascript:pop_dsp('pop_gls.pl?k=expansion',500,400)) followed by a general period of [contraction](javascript:pop_dsp('pop_gls.pl?k=contraction',500,400)). The transition from contraction to expansion is a [trough](javascript:pop_dsp('pop_gls.pl?k=trough',500,400)) and the transition from expansion to contraction is a [peak](javascript:pop_dsp('pop_gls.pl?k=peak',500,400)). Business-cycle fluctuations gyrate around the long-run trend that tracks full-employment production capabilities.

Long-Run Trend

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| **Long-Run Trend** |
| Long-Run Trend |

Before getting to the specific phases, first consider the long-run trend of real GDP, or what is termed either potential real GDP or full-employment GDP. The long-run trend is illustrated by the blue line in the exhibit at the right. Potential real GDP is the amount of output that the [economy](javascript:pop_dsp('pop_gls.pl?k=economy',500,400)) can produce if all [resources](javascript:pop_dsp('pop_gls.pl?k=resources',500,400)) are fully employed. This line has a positive [slope](javascript:pop_dsp('pop_gls.pl?k=slope',500,400)) because the economy's production capabilities increase over time as the quantity and quality of resources increase. The positive slope of the long-run trend line reflects a 3 percent annual growth of production capabilities.

However, as this exhibit reflects actual real GDP, indicated by the red line, does not coincide with this long-run trend of potential real GDP. During some periods actual real GDP is greater than potential real GDP and in other periods actual real GDP is less than potential real GDP. At some times actual real GDP grows faster than potential real GDP. In other times actual real GDP grows slower than potential real GDP. And on occasion actual real GDP declines even though potential real GDP continues to rise.

The fact that actual real GDP does not coincide with the long-run trend of potential real GDP is the essence of business cycles and instability of the macroeconomy.

Contraction

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| **Contraction** |
| Contraction |

One of the two primary business-cycle phases is a contraction. A contraction, which is a period of declining economic activity, is illustrated in this exhibit.

The shaded segment of the real GDP line between points A and B is the contraction. Clearly real GDP declines over this segment. A contraction generally takes the economy from at or above the long-run trend to below the long-run trend. Because the long-run trend represents [full employment](javascript:pop_dsp('pop_gls.pl?k=full%20employment',500,400)), [unemployment](javascript:pop_dsp('pop_gls.pl?k=unemployment',500,400)) results when real GDP is below the long-run trend, or when actual real GDP is less than potential real GDP. Moreover, the lower real GDP dips below the long-run trend, then the greater is unemployment.

A contraction typically lasts about a year, but could be as short as six months or as long as eighteen months. The longest contraction on record, occurring during the [Great Depression](javascript:pop_dsp('pop_gls.pl?k=Great%20Depression',500,400)), lasted almost four years.

Trough

A contraction does not last forever, at least none have so far. The end of a contraction, and the onset of an expansion is a trough. The trough in the previous exhibit is indicated by point B. It is the end of the previous contraction that took the economy from point A to point B.

While a trough, the lowest level of the business cycle, might not seem like a good thing, it really is. A trough means that the contraction has ended and that an expansion is about to begin.

Expansion

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| **Expansion** |
| Expansion |

The second of the two primary business-cycle phases is an expansion. An expansion, which is a period of increasing economic activity, is illustrated in this exhibit.

The shaded segment of the real GDP line between points B and C is the expansion. Clearly real GDP increases over this segment. An expansion generally takes the economy from below the long-run trend to at or above the long-run trend. The early part of an expansion is usually termed a [recovery](javascript:pop_dsp('pop_gls.pl?k=recovery',500,400)) because the economy is "recovering" from the contraction.

Because the long-run trend represents full employment, when real GDP reaches the long-run trend and when actual real GDP is equal to potential real GDP, then the economy has full employment. Inflationary problems, however, arise when the actual real GDP exceeds potential real GDP as is the case in this diagram near point C. In addition, the more real GDP rises above the long-run trend, then the greater inflationary problems are likely to be.

An expansion typically lasts about three to four years, but could be as short as one year or as long as a decade. The longest expansion on record, occurring during the 1990s, lasted ten years.

Peak

An expansion, like a contraction, eventually comes to an end. The end of an expansion, and the onset of a contraction is a peak. The peak in the previous exhibit is indicated by point C. It is the end of the previous expansion that took the economy from point B to point C.

While a peak, the highest level of the business cycle, might seem like a good thing, it really has a down side. A peak means that the expansion has ended and that a contraction is about to begin.

BUSINESS CYCLES:

The recurring, but irregular, expansions and contractions of economic activity in the macroeconomy. While business cycles are frequently measured by real gross domestic product, they show up in many aggregate measures of economic activity, including the unemployment rate, the inflation rate, consumption expenditures, and tax collections, to name just a few. The study of macroeconomics is largely the study of business cycles. Macroeconomic theories seek to understand business cycles and macroeconomic policies seek to correct the problems of business cycles.

Business cycles are irregular, nonperiodic fluctuations in the macroeconomy, especially seen by changes in the [unemployment rate](javascript:pop_dsp('pop_gls.pl?k=unemployment%20rate',500,400)), the [inflation rate](javascript:pop_dsp('pop_gls.pl?k=inflation%20rate',500,400)), and growth rate of real GDP.

This means that the overall economy expands and grows for a while. How long? It could be a couple of years. It might be up to a decade. No one knows for sure. But then it contracts and declines for a while. How long? It could be six months. It might be a few years. No one knows. The economy expands. The economy contracts. It grows in spurts, it stops, it declines. Things are good, then bad.

Unfortunately, no one knows how long the good times will last before they turn bad. This is the non-periodic, irregular nature of business cycles. The economy might expand for a year or it might expand for a decade before it contracts. While the term "cycle" is used to indicate these fluctuations, business cycles are not cyclical or periodic in the same way as other noted cycles, such as the daily cycle of sunrise and sunset, the lunar cycle of full moon and new moon, or the seasonal cycle of spring, summer, fall, and winter.

Macroeconomics

The study of business cycles is intertwined with the macroeconomic branch of economics. In fact, macroeconomics is largely the study of business cycles. Macroeconomic theories seek to explain why business-cycle fluctuations exist. Macroeconomic policies are proposed to correct business-cycle fluctuations. Macroeconomic measures are devised to track business-cycle fluctuations. The key macroeconomic problems of unemployment and inflation result from business-cycle fluctuations. If it were not for business-cycle fluctuations, economists would have significantly less interest in the study of macroeconomics.

The Business Cycle Pattern

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| **A Typical Business Cycle** |
| Business Cycle |

Business cycles tend to be irregular, and thus largely unpredictable, fluctuations in the economic activity. However, on average, a complete cycle lasts from four to five years and tends to follow a consistent pattern of [expansion](javascript:pop_dsp('pop_gls.pl?k=expansion',500,400)), then [contraction](javascript:pop_dsp('pop_gls.pl?k=contraction',500,400)).

A typical business cycle is presented in the exhibit to the right. The four parts of a business cycle are contraction, expansion, [peak](javascript:pop_dsp('pop_gls.pl?k=peak',500,400)), and [trough](javascript:pop_dsp('pop_gls.pl?k=trough',500,400)). The jagged red line, which presents a hypothetical tracking of real GDP, can be used to illustrated the alternative parts of a business cycle.

* Contraction: A period of decline in which economic activity decreases for at least six months is termed a contraction. Contractions, also termed [recession](javascript:pop_dsp('pop_gls.pl?k=recession',500,400))s.
* Trough: The end of a contraction and transition to an expansion is designated a trough.
* Expansion: A period of growth in which economic activity tends to increase from month to month and year to year is termed an expansion. Expansions usually last about three to four years, but some have gone on as a long as a decade. The early part of an expansion is often termed a [recovery](javascript:pop_dsp('pop_gls.pl?k=recovery',500,400)).
* Peak: The end of an expansion and the transition to a contraction is designated a peak.
* Long-Run Trend: Business-cycle expansions and contractions fluctuate around the [long-run trend](javascript:pop_dsp('pop_gls.pl?k=long-run%20trend',500,400)), indicated in this exhibit as the straight, blue line. The long-run trend represents the production capacity of the economy and full employment.

The two most noted macroeconomic problems, inflation and unemployment, tend to be most pressing during specific phases of business cycles. The unemployment rate, for example, is almost guaranteed to increase during a contraction and decrease during an expansion. The inflation rate, by contrast, tends to increase during an expansion and decrease during a contraction.

The Study of Business Cycles

The macroeconomic study of businesses cycles is undertaken for two main reasons. One is academic, the other tends to be somewhat selfish.

* First, on the academic side, business cycles are an inherent part of the macroeconomy, they are part of the mechanism of the economy. Understanding the ups and downs of business cycles means a better understanding of the macroeconomy. Through this understanding, key macroeconomic problems, especially unemployment and inflation, can be addressed.
* Second, on the selfish side, human lives are seriously affected by the ups and downs of business cycles. The [unemployed](javascript:pop_dsp('pop_gls.pl?k=unemployed',500,400)) take a serious hit to their living standards during recessionary downturns. Those with fixed incomes or [financial wealth](javascript:pop_dsp('pop_gls.pl?k=financial%20wealth',500,400)) take a serious hit to their living standards during inflationary upturns.

The study of business cycles makes it possible to anticipate and prepare for these problems. Knowing that the economy is on the verge of higher inflation, gives people the opportunity to convert financial wealth into something less affected, or even helped, by inflation. Knowing a downturn is imminent, lets people plan for an extended period of unemployment.

The Great Depression

While the existence of economy-wide booms and busts has been common knowledge since the onset of the industrial revolution, the formal study of business cycles received a significant boost during the Great Depression of the 1930s. The Great Depression was a monumental economic bust that lasted for over a decade.

The severity of the Great Depression is perhaps best seen through the unemployment rate. In modern times, an unemployment rate in the range of 5 percent is common during expansionary good times. This rate is likely to increase into the 8 percent range during contractionary bad periods. However, in the 1930s it approached 25 percent, and never fell below 10 percent during the entire decade. This was Bad, with a capital B.

But unemployment was not the only indication of difficult economic times. All aspects of the economy were bad. Total production declined about 40 percent. Expenditures on production by all four sectors (household, business, government, and foreign) were all down, too. Consumption by the [household sector](javascript:pop_dsp('pop_gls.pl?k=household%20sector',500,400)) was off about 40 percent. Investment expenditures on capital goods by the [business sector](javascript:pop_dsp('pop_gls.pl?k=business%20sector',500,400)) was down a whopping 90 percent. Government purchases declined by 15 percent. And net exports by the [foreign sector](javascript:pop_dsp('pop_gls.pl?k=foreign%20sector',500,400)) declined by 60 percent.

In direct contrast, a few years earlier, in the 1920s, the economy was quite prosperous. Production was up. Unemployment was down. Life was good, then it fell apart. But that is the roller coaster ride of the economy. The economy is up, it is high, it is good, then it drops.

A Century of Instability

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| **Recent Business Cycles** |
| Business Cycle Data |

The official number trackers take enormous pride in keeping official track of official business cycles. The table at the right presents official information about official business cycles for the U.S. economy.

* The first column presents the month and year of official business cycle troughs--the end of a contraction. The second column displays the month and year of official business cycle peaks--then end of expansions. The next two columns are the lengths of contractions and expansions, in months. And the last two columns give the total duration of official business cycles, in months, measured from trough to trough and peak to peak, respectively.
* One recent expansion, which lasted for 10 years, began with a trough in March 1991. This trough ended an 8-month contraction that begin in July 1990. Prior to that there was a 16-month contraction from July 1981 to November 1982 followed by a 92-month expansion.
* Scanning the numbers indicates that contractions have ranged from a low of 6 months to a high of 43 months, which was the big contraction during the first half of the Great Depression. Expansions have ranged from a low of 10 months to a high of 120 months, which was the booming 1990s.

The fact that expansions and contractions come in assorted lengths is why business cycles are considered irregular and nonperiodic fluctuations. Some are long, some are short. A contraction might set in after a 10-month expansion or after a 10-year expansion.

Causes

Business cycles appear to be the result of the inherent instability of a complex economy. Dozens of specific aspects of the macroeconomy can, and probably have, created expansions and contractions. A few notable examples of business cycle inducing instability are [taxes](javascript:pop_dsp('pop_gls.pl?k=taxes',500,400)) (especially federal [income tax](javascript:pop_dsp('pop_gls.pl?k=income%20tax',500,400))es), government purchases (especially those associated with war-time military expenditures), [foreign trade](javascript:pop_dsp('pop_gls.pl?k=foreign%20trade',500,400)) (especially changes in [import](javascript:pop_dsp('pop_gls.pl?k=import',500,400))s caused by trade barriers), capital investment (especially when triggered by new [technology](javascript:pop_dsp('pop_gls.pl?k=technology',500,400)) or interest-rate changes), and household consumption (especially when affected by changes in [consumer confidence](javascript:pop_dsp('pop_gls.pl?k=consumer%20confidence',500,400)) and expectations about the future state of the macroeconomy).

While a number of events could, in theory, cause business-cycle instability, decades of study by economists suggest two notable causes worth highlighting--investment and political elections.

* Investment: A primary cause of business cycles that surfaces time and time again, is business sector investment in capital goods. This explanation goes something like this:

An expanding economy causes [interest rate](javascript:pop_dsp('pop_gls.pl?k=interest%20rate',500,400))s to rise. Because capital investment is often undertaken with borrowed funds, higher interest rates increase the cost of borrowing and discourage investment. The decline in investment triggers a [multiplier](javascript:pop_dsp('pop_gls.pl?k=multiplier',500,400)) effect which causes decreases in [gross domestic product](javascript:pop_dsp('pop_gls.pl?k=gross%20domestic%20product',500,400)), [national income](javascript:pop_dsp('pop_gls.pl?k=national%20income',500,400)), and consumption. The economy enters a contraction.

However, as the economy contracts, interest rates begin to fall. Lower interest rates reduce the cost of borrowing and entice greater capital investment. With additional spending on gross domestic product, the multiplier effect is triggered once again, but this time increasing national income and consumption. This then prompts the onset of another expansion.

This investment explanation implies that investment-induced business-cycle instability is a natural consequence of a market-based economy. Acting in their own best interests, businesses make the individual decisions that collectively trigger business-cycle expansions and contractions.

As such, business-cycle instability is best corrected by government intervention.

* Political Elections: A second explanation of business cycle ups and downs is politics. According to this explanation, government leaders manipulate the economy, causing business-cycle expansions and contractions, to achieve their own political ends. This explanation goes something like this:

Elected leaders, seeing an election on the horizon, decide to promote a business-cycle expansion because they know the public re-elects politicians during expansions and elect new ones during contractions. Politicians typically begin the onset of an expansion 2 to 3 years before an election. This stimulation can be achieved through expansionary fiscal and monetary policies, especially reducing taxes, increasing government purchases, and expanding the [money supply](javascript:pop_dsp('pop_gls.pl?k=money%20supply',500,400)).

After the election, the re-elected leaders realize that they must now address the problems created by the over expansion leading up to the election, especially higher inflation and [budget](javascript:pop_dsp('pop_gls.pl?k=budget',500,400)) deficits. This is accomplished by contractionary policies, especially raising taxes, decreasing government purchases, and restricting the money supply. Such post-election policies cause a business-cycle contraction. Fortunately for the elected leaders, the contraction hits after the election and only lasts about a year. They have plenty of time to get the economy expanding once again before the next election 2 to 3 years down the road.

This political explanation implies that business-cycle instability is the result of a government policies and not a consequence of natural market-based economy. Doing what is best for them, and abusing their power, politicians cause business-cycle expansions and contractions.

As such, business-cycle instability, can be corrected by limiting or even preventing government intervention.

Countercyclical Stabilization Policies

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| **Stabilization Policies** |
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To counter the problems associated with business cycles, especially high rates of unemployment and inflation, governments (especially the Federal, but occasionally state governments, too) undertake assorted [stabilization policies](javascript:pop_dsp('pop_gls.pl?k=stabilization%20policies',500,400)), especially [fiscal policy](javascript:pop_dsp('pop_gls.pl?k=fiscal%20policy',500,400)) and [monetary policy](javascript:pop_dsp('pop_gls.pl?k=monetary%20policy',500,400)). Fiscal policy is changes in government spending and taxes, that is, the government's fiscal budget. Monetary policy is changes in the amount of money circulating around the economy and interest rates.

The goal of stabilization policies is not merely to prevent contractionary declines, but to stabilize the overall business cycle pattern. Too much expansion can be just as problematic as a contraction. As such, the goal is to avoid contraction and promote expansion, and to keep expansion from running wild.

The exhibit to the right can be used to illustrate the goal of stabilization policies. The red line is the "natural" business cycle. Rising and falling around the long-run trend line. But it rises and falls too much, causing inflation and unemployment. The economy would rather have a business cycle more like that revealed with a click of the [Policy] button.

Stabilization policies are designed to work in the OPPOSITE direction of the business cycle, to be countercyclical. Expansionary policy that seeks to stimulate the economy is the recommended course of action to correct or avoid the unemployment problems of a contraction. Contractionary policy that seeks to restrict the economy is recommended to avoid or correct the inflationary problems of excessive expansion.

Primary Policies

Expansionary policies are designed to counter a business-cycle contraction. The two most popular types are [expansionary fiscal policy](javascript:pop_dsp('pop_gls.pl?k=expansionary%20fiscal%20policy',500,400)) and [expansionary monetary policy](javascript:pop_dsp('pop_gls.pl?k=expansionary%20monetary%20policy',500,400)).

* Expansionary fiscal policy is increasing government purchases or reducing taxes. Greater spending is just the thing needed if investment is the cause of business cycles. The drop in investment can be offset by greater government spending. Or taxes can be reduced, which leaves more spendable income in the hands of the consumption-spending household sector. This boost in consumption can also offset the drop in investment.
* Expansionary monetary policy is an increase in the amount of money in circulation. With more money, households and business are able to spend more, buy more production, and counter the contraction. Along with the increase in the money supply, interest rates decline, which encourages expenditures made by borrowing.

Contractionary policies are, well, the exact opposite of expansionary policies. Contractionary policies are appropriate when a business-cycle expansion heats up to the point of higher inflation. Again note that these are a countercyclical policies. Contractionary policies counter an expansion and expansionary policies counter a contraction. The two types are [contractionary fiscal policy](javascript:pop_dsp('pop_gls.pl?k=contractionary%20fiscal%20policy',500,400)) and [contractionary monetary policy](javascript:pop_dsp('pop_gls.pl?k=contractionary%20monetary%20policy',500,400)).

* Contractionary fiscal policy is higher taxes or fewer government purchases. Inflation worsens during an expansion when buyers try to buy more than the economy can produce. This excessive spending, and the inflationary pressure, can be reduced directly by reducing government purchases or indirectly by increasing taxes and diverting household income away from consumption expenditures.
* Contractionary monetary policy reduces the amount of money in the economy. If people have less money, then they buy less stuff, the business-cycle expansion flattens, and inflationary pressures are reduced. Along with the decrease in the money supply, interest rates rise, which discourages expenditures made by borrowing.